REPORT ON A SECOND COLLECTION OF NOVA SCOTIAN EUPTERYGID LEAF-HOPPERS, INCLUDING DESCRIPTIONS OF NEW VARIETIES.

BY W. L. MCATEE, WASHINGTON, D.C.

Like a previous collection* sent to the writer by Professor W. H. Brittain, Provincial Entomologist of Nova Scotia, the present is reported upon in print, because it contains undescribed forms. All specimens are in the collection of the Nova Scotia Department of Agriculture.

LIST OF SPECIES.

Alebra albostriella var. fulteola Herrich-Schäffer.-Digby Co., N. S., Aug. 14, 1918.

Empoasca	atrolabes	GilletteI	Digby	Со.,	N.S.,	Aug.	3,	1918.
4.4	obtusa	Walsh	4.6	4.6	6.6	6.6	15,	4.4
4.4	pergande	i Gillette.—	- **	6.6	4.4	6.6	3,	4.4
**	unicolor	<i></i>	4.6	6.6	4.6	6.6	15,	4.4

Typhlocyba querci Fitch.

This is a robust Typhlocyba, measuring up to 5 mm. in length. The length of vertex in proportion to width of space between inner margins of eves (synthlipsis) is as 7-8: 14-16. The ground colour usually is pale vellow.

The colour varieties including those hereafter described may be separated by the following key:

A. Elvtral markings in the form of small dusky spots.

- B. With spots only in apices of the discal cells of
- elytra.....var. querci Fitch. With three pairs of spots along the commissural BB.

AA. Elytral markings in the form of cross-bands or lengthwise vittæ.

- C. The most conspicuous markings are cross-bands.
 - D. Anterior cross-band narrow, directed backward on the sides. (var. bifasciata Gillette and Baker now called).....var. gillettei Van Duzee.
 - DD. Anterior cross-band broad, directed forward on the sides.... var. volans, n. var.

CC. The most conspicuous markings are lengthwise.

- Clavus except extremities and adjacent corium dusky; no E. posterior cross-band.....var. grata, n. var.
- Elytron with a lengthwise streak connecting anterior EE. and posterior cross-bands.....var. scripta, n. var.

In the present collection are represented:

Typhlocyba querci var. querci Fitch .- Digby Co., N.S., Aug. 3, 1918.

Typhlocyba querci var. gillettei Van Duzee .- Digby Co., N.S., Aug. 8, 1918: Victoria, B.C. July 17, 1918.

Typhlocyba querci var. volans, new variety.

With two dusky cross-bands, much broader than in variety gillettei Van Duzee, the posterior over the cross-veins, the anterior over middle of clavi, sloping forward on the corium parallel to anterior edge of elytron. In var.

^{*}See Can. Ent., Vol. L, No. 11, 1918, pp. 363-361. October, 1919

gillettei this band is narrower, nearer apices of clavi and slopes obliquely backward, not forward.

One 9 specimen, Digby Co., N.S., Aug. 18, 1918.

Typhlocyba querci var. grata, new variety.

Scutellum dusky; elytra with a large dusky saddle-spot, occupying most of the clavi, and a portion of each adjoining corium; no posterior band or clouding.

One 9 specimen, Digby Co., N.S., Aug. 14, 1918.

Typhlocyba querci var. scripta, new variety.

Scutellum chiefly dusky; elytra with dusky bands at middle and on crossveins, as in var. *gillettei*, apical cells smoky, and with a longitudinal dusky stripe on clavus and overlying claval suture connected with band over cross-veins. These markings leave the margin anteriorly and the tip posteriorly, of the clavus, of the ground colour.

One Q specimen, Digby Co., N.S., Sept. 5, 1918.

Typhlocyba rosæ Linnæus.—Digby Co., N.S., Aug. 3, 5, 8, 13, 15, 1918; Truro, N.S., July 24, 1918; Royal Oak, B.C., Sept. 29, 1917.

Erythroneura obliqua Say.-Acaciaville, N.S., May 16, 17, 1917.

DESCRIPTIONS OF FOUR CATOCALA LARVÆ.

BY R. R. ROWLEY, LOUISIANA, MO.

Among a number of mature Catocala larvæ, taken under the bark of hickory trees in the early part of last summer, a dozen or more proved of unusual interest, one a *lachrymosa*, previously undescribed, another a typical *obscura*, a third and fourth showing the slight differences between the closely related species *retecta* and *flebilis*, while still another gave *judith*, but the description was misplaced.

Other larvæ were of *angusi* and its variety *lucetta*, hardly distinguishable from *habilis*. Of six *angusi* moths, five were var. *lucetta*, only one being a typical *angusi*; a like ratio existing in the woods here between the variety and present form. The species, however, is usually rare.

Catocala flebilis.—Mature larva 2½ inches long, leaden gray with lighter tubercles. The mid-dorsal band lighter than the general body colour, constricted at the segment edges, forming a series of spots of chain-link appearance. The spots on the first, second and fifth abdominal segments bordered by a black encircling line (on three sides). A dark cross-band covers the back half of the fifth abdominal segment. A black-cross line behind the eighth abdominal segment. The sublateral line or narrow band is dark or quite black above the spiracles. True and pro-legs general body colour. The lateral line of setæ composed of so few and short bristles as to be hardly noticeable. Head gray, round, with short lateral mouth dash of black.

Ventral colour soiled white with faint red blotches about the row of midventral black spots. Larva taken under bark of *Carya alba* (shag-bark hickory). Cocooned June 15th, and gave imago July 20th.

Catocala retecta.—Mature larva $2!/_4$ inches long, dark leaden brown. A mid-dorsal longitudinal "chain link" like narrow band, a little lighter than the general body colour. Still narrower bands of darker hue bound the mid-dorsal band and, beginning with the second abdominal segment, these bounding bands october, 1919